

Remarks

Claims 1, 5, 7, and 9 to 21 were pending when last examined. With this Response, Applicant cancels claim 1, amends claim 5 to independent form including the limitations of claim 1, and amends claims 12 and 18 to correct typos.

§ 103 Rejections

The Examiner rejected claim 1 as being unpatentable over Applicant's admitted prior art (AAPA) in the Description of Related Art in view of U.S. Patent No. 5,809,542 ("Byers et al."). Applicant has canceled claim 1, thereby rendering this rejection moot.

The Examiner rejected claim 5 as being as being unpatentable over AAPA in view of Byers et al. and further in view of U.S. Patent No. 5,668,417 ("Wiscombe et al."). The Examiner agreed with the Applicant that Byers et al. fails to disclose a shared power domain. The Examiner then cited Wiscombe et al. for disclosing "two separate power supplies, wherein a power circuit is provided to provide a shared power to a third plurality of elements for said two power supplies (Figure 2)." November 18, 2003 Final Office Action, p. 3 (emphasis added). Applicant respectfully traverses.

Wiscombe et al. discloses a conventional power scheme where a paralleling board 104 current shares power supplies PS1 106 and PS2 110 to power a computer 102 (see Fig. 1). If one power supply fails, the other power supply will power computer 102 on its own.

A computer 102, such as a personal computer (PC) or the like, includes a paralleling board 104, which receives power from redundant power supplies PS1 106 and PS2 110 on corresponding power buses 107, 111, respectively. The paralleling board 104 preferably includes current share circuitry for sharing current between the respective power signals and provides power to the computer 102 on an output power bus 103.

PS1 106 receives power from an AC SOURCE1 108 and PS2 110 receives power from an AC SOURCE2 112, where the AC sources 108 and 110 typically provide unregulated power and are preferably separate and impendent from one another. In this manner, if PS1 106 or its AC SOURCE1 108 should fail, then PS2 110 and its AC SOURCE2 maintains power to the computer 102 until the PS1 106 is replaced or otherwise serviced, or until the power from the AC SOURCE1 108 returns. The paralleling board 104 automatically maintains power to the computer 102 regardless of whether the power is being received from either of the power supplies PS1 106, PS2 110 or a combination of the two.

Wiscombe et al., col. 3, lines 23 to 62 (emphasis added).

Byers et al. applies the same conventional power scheme to two power domains so that each power domain is powered by two current sharing power supplies (see Fig. 34). Specifically, Power Supply A1 1082 and Power Supply A2 1084 (collectively "DC Power Source A 1018") are current shared to power components in a Power Domain A, and Power Supply B1 1086 and Power Supply B2 1088 (collectively "DC Power Source B 1020") are current shared to power components in a Power Domain B.

FIG. 34 illustrates the AC power source and DC power source redundancy of the preferred embodiment. To provide an extra level of security against voltage loss, redundant power supplies are used in each DC power source. Power Supply A1 1082 and Power Supply A2 1084 reside in DC Power Source A 1018, and Power Supply B1 1086 and Power Supply B2 1088 reside in DC Power Source B 1020. Power Supply A1 1082 connects to Power Domain A 1010 through A1 +5 V 1090 and A1 GND 1092. Power Supply A2 1084 connects to Power Domain A 1010 through A2 +5 V 1094 and A2 GND 1096. Power Supply B1 1086 connects to Power Domain B 1012 through B1 +5 V 1098 and B1 GND 1100. Power Supply B2 1088 connects to Power Domain B 1012 through B2 +5 V 1102 and B2 GND 1104. If either power supply fails within DC Power Source A or DC Power Source B, the remaining power supply can supply enough current to keep the circuitry of the power domain operative. When both power supplies are operative, the power supplies share current, and both provide current to the power domain. A higher number of redundant power supplies could be used if a higher degree of DC power reliability was desired; however, dual power supplies in each DC power source provided the requisite reliability in the preferred embodiment due to the low failure rate of the power supplies implemented.

Byers et al., col. 42, line 49 to col. 43, line 6 (emphasis added).

As described above, Wiscombe et al. does not add to but merely repeats what is disclosed in Byers et al. As the Examiner agreed with the Applicant that Byers et al. fails to disclose a shared power domain, the combination of Wiscombe et al. and Byers et al. cannot disclose a shared power domain derived from two groups of current sharing power supplies as recited in claim 5.

Understandably, the Examiner may have thought that DC Power Source A 1018 and DC Power Source B 1020 in Fig. 34 of Byers et al. are equivalents of power supply PS1 106 and power supply PS2 110 in Fig. 1 of Wiscombe et al. so that Fig. 34 of Byers et al. and Fig. 1 of Wiscombe et al. can be combined to show the elements of claim 5. However, as described above, they are different because DC Power Source A 1018 and DC Power Source B 1020 of Byers et al. each includes two current sharing power supplies, whereas power supply PS1 106 and power supply PS2 110 of Wiscombe et al. are the two current sharing power supplies. Therefore, Wiscombe et al. and Byers et al. cannot be combined as suggested by the Examiner to show a shared power domain.

Claims 7, 9, and 15 to 21 depend from claim 5 and are patentable over the combination of AAPA, Byers et al., and Wiscombe et al. for at least the same reasons as claim 5.

Claim 10 is patentable over the cited references for at least the same reasons as discussed above for claim 5.

Claims 11 to 14 depend from claim 10 and are patentable for at least the same reasons that claim 10 is patentable.

In summary, claims 1 to 14 were pending in the above-identified application when last examined. This Response cancels claim 1 and amends claims 5, 12, and 18. For the above reasons, Applicant respectfully requests allowance of claims 5, 7, and 9 to 21. Should the Examiner have any questions, please call the undersigned at (408) 382-0480.

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Respectfully submitted,



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